PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: JAMES A. RICH
CALFEE, HALTER & GRISWOLD, LLP
800 SUPERIOR AVENUE
CLEVELAND, OH 44114-2688

# PCT

## NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT OR THE DECLARATION

(PCT Rule 44.1)

| | |
|---|---|
| Applicant's or agent's file reference 23959-0402 / 4074 | Date of Mailing (day/month/year) 25 APR 2000 |
| International application No. PCT/US99/29559 | FOR FURTHER ACTION See paragraphs 1 and 4 below |
| Applicant SENSIR TECHNOLOGIES | International filing date (day/month/year) 13 DECEMBER 1999 |

1. [X] The applicant is hereby notified that the international search report has been established and is transmitted herewith.

**Filing of amendments and statement under Article 19:**
The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

**When?** The time limit for filing such amendments is normally 2 months from the date of transmittal of the international search report; however, for more details, see the notes on the accompanying sheet.

**Where?** Directly to the International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland
Facsimile No.: (41-22) 740.14.35

**For more detailed instructions,** see the notes on the accompanying sheet.

2. [ ] The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3. [ ] **With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:**

[ ] the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

[ ] no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Further action(s):** The applicant is reminded of the following:

**Shortly after 18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in rules 90 *bis* 1 and 90 *bis* 3, respectively, before the completion of the technical preparations for international publication.

**Within 19 months** from the priority date, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).

**Within 20 months** from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the priority date or could not be elected because they are not bound by Chapter II.

DOCKETED
MAY - 1 2000
T.L.B. IP Dept.

Name and mailing address of the ISA/US
Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer
Georgia Epps

Telephone No. (703) 305-0884

RECEIVED
APR 27 2000

(See notes on accompanying sheet)

PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| | | |
|---|---|---|
| Applicant's or agent's file reference 23959-04021 | FOR FURTHER ACTION | see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below. |
| International application No. PCT/US99/29559 | International filing date *(day/month/year)* 13 DECEMBER 1999 | (Earliest) Priority Date *(day/month/year)* 14 DECEMBER 1998 |
| Applicant SENSIR TECHNOLOGIES | | |

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

[X] It is also accompanied by a copy of each prior art document cited in this report.

1. [ ] **Certain claims were found unsearchable** (See Box I).

2. [ ] **Unity of invention is lacking** (See Box II).

3. [ ] The international application contains disclosure of a **nucleotide and/or amino acid sequence listing** and the international search was carried out on the basis of the sequence listing
   - [ ] filed with the international application.
   - [ ] furnished by the applicant separately from the international application,
     - [ ] but not accompanied by a statement to the effect that it did not include matter going beyond the disclosure in the international application as filed.
   - [ ] transcribed by this Authority.

4. With regard to the title,
   - [X] the text is approved as submitted by the applicant.
   - [ ] the text has been established by this Authority to read as follows:

5. With regard to the abstract,
   - [ ] the text is approved as submitted by the applicant.
   - [X] the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is:
   Figure N . 2
   - [ ] as suggested by the applicant.
   - [ ] because the applicant failed to suggest a figure.
   - [X] because this figure better characterizes the invention.
   - [ ] None of the figures.

INTERNATION[redacted] SEARCH REPORT

[redacted]tional application No.
PCT/US99/29559

Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

An opto-electronic image magnifying system. The magnifying system includes; a light source (38, 39) which illuminates an object to be viewed; a miniaturized opto-electronic magnifier module(MOM), made of a lens (31) and a photodetector array(32), which recieves the light form the illuminated object; an electronic circuit(34) which receives the signal form the MOM; a video-monitor(35) which recieves the magnified signal from the electronic circuit and displays the image. The opto-electronic image magnifying system allows for small objects or features of small objects to be observed in which historically compound microscopes or specialized optical viewing system were required to observe the small objects.

**INTERNATIONAL SEARCH REPORT**

International application No.
PCT/US99/29559

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(6) :G02B 3/00
US CL : 359/350, 356/346, 356/237.2

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 359/350, 353, 354; 356/346, 237.2, 301; 250/559.39

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

APS

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|---|---|---|
| Y | US 5,649,972 A (Hochstein) 22 July 1997/(22.07.97), col 3, lines 65-67, col 4 lines 1-3. | 19 and 20 |
| Y | US 5,672,399 A (Kahlbaug et al.) 30 September 1997/(30/09/97), col 39, lines 45-60 | 1-26 |
| Y | US 5,204,768 A (Tsakiris et al.) 20 April 1993/(20.04.93), col 4, 15-20. | 25 |
| Y | US 5,329,354 A (Yamamoto et al) 12 July 1994/(12.07.94), col 4, lines 30-32. | 22 |
| Y | US 5,516,388 A (Moran et al.) 14 May 1996/(14.05.96), col 3, lines 60-67, col 4, line 50. | 36 |

[X] Further documents are listed in the continuation of Box C. [ ] See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search
29 FEBRUARY 2000

Date of mailing of the international search report
25 APR 2000

Name and mailing address of the ISA/US
Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231
Facsimile No. (703) 305-3230

Authorized officer
Georgia Epps
Telephone No. (703) 308-0884

Form PCT/ISA/210 (second sheet)(July 1992)*

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/29559

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|---|---|---|
| Y | US 4,537,508 A (Doyle) 27 April 1985/(27.04.85), col 3, lines 21-29, col 7, lines 39-47, | 39-42 |
| Y | US 5,963,314 A (Worster et al.) 05 October 1999/(05.10.99), col 13, lines 65-67, col 14, lines 4-11. | 1-26, 32-42 |
| A | | 27-31 |
| Y | US Re. 36,529 A (Lewis et al.) 25 January 2000/(25.01.00), col 7, lines 35-55, col 8, lines 31-35, col 9, lines 9-26, col 10 lines 1-7, line 26, col 11, lines 2 asnd 3, col 11, lines 40-45, col 16, lines 12-25. | 1-26, 32-42 |

# PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To: JAMES A. RICH
CALFEE, HALTER & GRISWOLD, LLP
1400 MCDONALD INVESTMENT CTR.
800 SUPERIOR AVENUE
CLEVELAND, OH 44114-2688

# PCT

## NOTIFICATION OF TRANSMITTAL OF INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

| | |
|---|---|
| Date of Mailing *(day/month/year)* | 14 MAR 2001 |
| Applicant's or agent's file reference: 23959-04028 | IMPORTANT NOTIFICATION |
| International application No.: PCT/US99/29559 | International filing date *(day/month/year)*: 13 DECEMBER 1999 |
| | Priority Date *(day/month/year)*: 14 DECEMBER 1998 |
| Applicant: SENSIR TECHNOLOGIES | |

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.

2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.

3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices)(Article 39(1))(see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

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MAR 21 2001

| | |
|---|---|
| Name and mailing address of the IPEA/US<br>Commissioner of Patents and Trademarks<br>Box PCT<br>Washington, D.C. 20231<br>Facsimile No. (703) 305-3230 | Authorized Officer<br>GEORGIA EPPS<br>Telephone No. (703) 308-4883 |

Form PCT/IPEA/416 (July 1992)*

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

**(PCT Article 36 and Rule 70)**

| | | |
|---|---|---|
| Applicant's or agent's file reference<br>23959-04028 | **FOR FURTHER ACTION** | See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) |
| International application No.<br>PCT/US99/29559 | International filing date *(day/month/year)*<br>13 DECEMBER 1999 | Priority date *(day/month/year)*<br>14 DECEMBER 1998 |
| International Patent Classification (IPC) or national classification and IPC<br>IPC(7): G02B 3/00 and US Cl.: 359/350, 356/346, 356/237.2 | | |
| Applicant<br>SENSIR TECHNOLOGIES | | |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets.

   ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of 0 sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the report
   - II ☐ Priority
   - III ☐ Non-establishment of report with regard to novelty, inventive step or industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☐ Certain observations on the international application

| | |
|---|---|
| Date of submission of the demand<br>14 JULY 2000 | Date of completion of this report<br>21 FEBRUARY 2001 |
| Name and mailing address of the IPEA/US<br>Commissioner of Patents and Trademarks<br>Box PCT<br>Washington, D.C. 20231<br>Facsimile No. (703) 305-3230 | Authorized officer<br>GEORGIA EPPS<br>Telephone No. (703) 308-4883 |

Form PCT/IPEA/409 (cover sheet) (July 1998)*

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US99/29559

## I. Basis of the report

1. With regard to the elements of the international application:*

[X] the international application as originally filed

[X] the description:
pages 1-27, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of

[X] the claims:
pages 28-38, as originally filed
pages NONE, as amended (together with any statement) under Article 19
pages NONE, filed with the demand
pages NONE, filed with the letter of

[X] the drawings:
pages 1-8, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of

[X] the sequence listing part of the description:
pages NONE, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

[ ] the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

[ ] the language of publication of the international application (under Rule 48.3(b)).

[ ] the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

[ ] contained in the international application in printed form.

[ ] filed together with the international application in computer readable form.

[ ] furnished subsequently to this Authority in written form.

[ ] furnished subsequently to this Authority in computer readable form.

[ ] The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

[ ] The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. [X] The amendments have resulted in the cancellation of:

[X] the description, pages NONE

[X] the claims, Nos. NONE

[X] the drawings, sheets/~~fig~~ NONE

5. [ ] This report has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

** Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).*

*** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.*

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US99/29559

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. statement

| | | | |
|---|---|---|---|
| Novelty (N) | Claims | 1-42 | YES |
| | Claims | NONE | NO |
| Inventive Step (IS) | Claims | 24, 27-31 and 35-42 | YES |
| | Claims | 1-23, 25, 26 and 32-34 | NO |
| Industrial Applicability (IA) | Claims | 1-42 | YES |
| | Claims | NONE | NO |

2. citations and explanations (Rule 70.7)

Claims 1-8, 12-17, 25 and 26 lack an inventive step under PCT Article 33(3) as being obvious over Worster et al.(U.S. Patent No. 5,963,314) in view of Lewis et al.(U.S. Patent No. Re. 36,529).

Regarding claims 1-8 Worster discloses a lens to produce a magnified real image(fig 2, 205)on a photo detector(fig 2 212); electronic display apparatus(fig 2,215); electronic scaling apparatus(fig 2, 213-214 and col 14, lines 40-50). Worster does not discloses an array of photo-detectors or a minor fraction of the total magnification of the image of the sample is produced by the lens. Regarding the array of photo detectors, Lewis et al. discloses an array of photo-detectors. It would have been obvious to one skilled in the art at the time of the invention, to use an array of photo detectors as shown by Lewis et al., in the in the imaging device of Worster et al., since as shown by Lewis et al. arrays of photodetectors are commonly used in imaging device for detecting light from an object to be imaged. Regarding the major part of the magnification is produced by the electronic scaling. Worster discloses a lens positioned for magnification as well as electronic magnification. However, Worster does not discloses the exact magnification provided by the electronic means. It would have been obvious an obvious matter of design choice to increase the magnification from the electronic means when compared to the lens magnification, since the applicant has not disclosed that having the magnification from the electronic means being much greater than the lens solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with a more balanced magnification between the electronic magnification means and the lens magnification means.

Regarding claim 12, Worster discloses using a charge coupled video camera(col 10 lines 5-12).

Regarding claims 13 and 25, Worster does not discloses using a television receiver. However, Worster discloses using a computer monitor(fig 2, 215). It would have been obvious an obvious matter of design choice to use a television receiver, since the applicant has not disclosed that using television (Continued on Supplemental Sheet.)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US99/29559

**Supplemental Box**
(To be used when the space in any of the preceding boxes is not sufficient)



Continuation of: Boxes I - VIII

V. 2. REASONED STATEMENTS - CITATIONS AND EXPLANATIONS (Continued):
receiver solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with a computer monitor.

Regarding claim 14 and 26, Worster discloses using a computer monitor(fig 2, 215).
Regarding claim 15, Worster discloses using a recording apparatus(fig 2, 214).
Regarding claim 16, Worster discloses an apparatus for supporting a sample(fig 2, 224).
Regarding claim 17, Worster discloses the apparatus is a plate(fig 2, 214).

Claim 9 lacks an inventive step under PCT Article 33(3) as being obvious over the prior art as applied to claim rejection 1 above, Lewis in view of Worster, and further in view of Johansson(U.S. Patent No. 4,764,016).

Regarding claim 9, a modified Lewis does not disclose the focal length of the lens or specifically the focal length is between 2.5 and 50mm. However, Johansson discloses a lens with a focal length between 2.5 and 50 mm(col 3, lines 1-10). It would have been obvious to one skilled in the art at the time of the invention, to use a lens with a focal length of 2.5 mm, as shown by Johansson, in the in the imaging device of Lewis et al., since as shown by Johansson, lenses with a focal length of 2.5 mm are commonly used for focusing light on objects to be viewed.

Claims 10 and 11 lack an inventive step under PCT Article 33(3) as being obvious over the prior art as applied to claim rejection 1 above and further in view of Gordon et al.(U.S. Patent No. 6,057,540).

Regarding claims 10 and 11, Worster does not disclose the diameter of the photo detectors used. However, Gordon et al. discloses using photo detectors which are 45 by 45 microns(col 4, lines 35-50). It would have been obvious to one skilled in the art, at the time of the invention to use photo detectors which are 45 by 45 microns, as shown by Gordon et al., in the imaging device of Worster, since as shown by Gordon et al., photo detector 45 by 45 microns are commonly used in imaging devices to detect light flux. Additionally,it would have been obvious an obvious matter of design choice to use photodetectors of other sizes, since the applicant has not disclosed that using photo detector which are 1/4 inch in size solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with photo detectors of 45 by 45 microns.

Claims 1, 17, 21 and 22 lack an inventive step under PCT Article 33(3) as being obvious over Lewis et al.(U.S. Patent No. Re. 36,529)in view of Worster et al.(U.S. Patent No. 5,963,314).

Regarding claim 1, Lewis discloses a lens to produce a magnified real image(fig 1, 32)on a photo detector array(fig 1, 46); electronic display apparatus(fig 2, 110); Lewis does not disclose an electronic scaling apparatus or a minor fraction of the total magnification of the image of the sample is produced by the lens. However Worster discloses an electronic scaling apparatus(fig 2, 213-214 and col 14, lines 40-50). It would have been obvious to one skilled in the art at the time of the invention, to use an electronic scaling apparatus as shown by Worster et al., in the imaging device of Lewis et al., since as shown by Worster et al. an electronic scaling apparatus is commonly used in imaging devices for aiding in the viewing of the object. Regarding the major part of the magnification is produced by the electronic scaling. A modified Lewis discloses a lens positioned for magnification as well as electronic magnification. However, lewis does not discleses the exact magnification provided by the electronic means. It would have been obvious an obvious matter of design choice to increase the magnification from the electronic means when compared to the lens magnification, since the applicant has not disclosed that having the magnification from the electronic means being much greater than the lens solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with a more balanced magnification between the electronic magnification means and the lens magnification means.

Regarding claims 17, Lewis et al. discloses where the window is transparent(fig 1, 33).

Regarding claim 21, Lewis et al. discloses the plate is part of a internal reflection element used for spectroscopic(col 5, lines 5-10 and col 4, line 60 to col 5, line 10)

Regarding claim 22, Lewis et al. discloses a low voltage lamp(col 5, line 21).

Claims 18-20 lack an inventive step under PCT Article 33(3) as being obvious over the prior art as applied in claim rejection 17 above and further in view of Hochstein(U.S. Patent No. 5,649,972).

Regarding claim 18-20, Lewis et al. does not disclose the material of the glass plate is made of zinc selenide(which is abrasion resistant). However, Hochstein discloses a window material which allows light to pass through made of zinc selenide. It would have been obvious to one skilled in the art at the time of the invention, to use a window material made of zinc selenide as shown by Hochstein, in the in the imaging device of Lewis et al., since as shown by Hochstein, an window material made of zinc selenide is commonly used in devices which requires a window material for light to pass through.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US99/29559

**Supplemental Box**
(To be used when the space in any of the preceding boxes is not sufficient)



Continuation of: Boxes I - VIII

Claim 23 lacks an inventive step under PCT Article 33(3) as being obvious over the prior art as applied to claim rejection 1 above, Lewis in view of Worster, and further in view of Yamamoto et al.(U.S. Patent No. 5,329,354).

Regarding claim 23, Lewis does not disclose using optical fibers for delivering the light to the sample to be illuminated. However, Yamamoto et. discloses using fiber optics to deliver the light to the object to be illuminated stating that this allows for reduction in the size of the apparatus(fig 1, 20 , 21). It would have been obvious to one skilled in the art at the time of the invention, to use optical fibers for delivering the light to the sample, as shown by Yamamoto et al., in the in the imaging device of Lewis et al., since as shown by Yamamoto et al., optical fibers for delivering the light to the sample are commonly used in order to reduce the size of the apparatus.

Claims 32 and 33 lack an inventive step under PCT Article 33(3) as being obvious over Worster et al.(U.S. Patent No. 5,963,314) in view of Lewis et al.(U.S. Patent No. Re. 36,529)and Reid et al. (U.S. Patent No. 6,005,964).

Regarding claims 32 Worster discloses a lens to produce a magnified real image(fig 2, 205)dn a photo detector(fig 2 212); electronic display apparatus(fig 2,215); electronic scaling apparatus(fig 2, 213-214 and col 14, lines 40-50). Worster does not discloses an array of photo-detectors, a minor fraction of the total magnification of the image of the sample is produced by the lens or the image is magnified up to 1000 times. Regarding the array of photo detectors, Lewis et al. discloses an array of photo-detectors. It would have been obvious to one skilled in the art at the time of the invention, to use an array of photo detectors as shown by Lewis et al., in the in the imaging device of Worster et al., since as shown by Lewis et al. arrays of photodetectors are commonly used in imaging device for detecting light from an object to be imaged. Regarding the major part of the magnification is produced by the electronic scaling. Worster discloses a lens positioned for magnification as well as electronic magnification. However, Worster does not discloses the exact magnification provided by the electronic means. It would have been an obvious matter of design choice to increase the magnification from the electronic means when compared to the lens magnification, since the applicant has not disclosed that having the magnification from the electronic means being much greater than the lens solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with a more balanced magnification between the electronic magnification means and the lens magnification means. Regarding the magnification being 1000 times. Reid et al. discloses using an imaging device with an objective lens with a magnification of 1000 times(col 8, lines 25-30). It would have been obvious to use an objective lens with a magnification of 1000 times as shown by Reid et al., in the imaging device of Worster, since as shown by Reid et al., imaging systems commonly use objective lenses with a magnification of 1000 times to view objects of microscopic size.

Regarding claim 33 Worster discloses a computer monitor(fig 2, 215).

Claims 34 lack an inventive step under PCT Article 33(3) as being obvious over Worster et al.(U.S. Patent No. 5,963,314) in view of Lewis et al.(U.S. Patent No. Re. 36,529)and Abe (U.S. Patent No. 5,966,204).

Regarding claims 34 Worster discloses a lens to produce a lens to produce a magnified real image(fig 2, 205)on a photo detector(fig 2 212); an internal reflection element having a surface electronic display apparatus(fig 2,215); electronic scaling apparatus(fig 2, 213-214 and col 14, lines 40-50). Worster does not discloses an array of photo-detectors, a minor fraction of the total magnification of the image of the sample is produced by the lens or the lens is positioned below the support. Regarding the array of photo detectors, Lewis et al. discloses an array of photo-detectors. It would have been obvious to one skilled in the art at the time of the invention, to use an array of photo detectors as shown by Lewis et al., in the imaging device of Worster et al., since as shown by Lewis et al., arrays of photodetectors are commonly used in imaging device for detecting light from an object to be imaged. Regarding the major part of the magnification is produced by the electronic scaling. Worster discloses a lens positioned for magnification as well as electronic magnification. However, Worster does not discloses the exact magnification provided by the electronic means. It would have been an obvious matter of design choice to increase the magnification from the electronic means when compared to the lens magnification, since the applicant has not disclosed that having the magnification from the electronic means being much greater than the lens solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with a more balanced magnification between the electronic magnification means and the lens magnification means. Regarding the lens being placed below the support. Abe discloses that a microscope attached to a display can also be rearranged to place the lens below the support or what is called an inverted microscope(col 10 lines 60-67). It would have been obvious to invert the microscope, as shown by Abe, in the imaging device of Worster. since as shown by Abe, microscope imaging systems commonly are inverted so as to view the sample with the light passing through it, as opposed to reflecting the light off of the sample.

Claims 1-42 meet the criteria set out in PCT Article 33(2)&(4), because the prior art does not teach or fairly suggest the limitations of the prior art and the invention can be used in industry.

Claims 24 and 27-31 meet the criteria set out in PCT Article 33(2)-(4), because the prior art does not teach or fairly suggest; a lens designed and adapted to produce a magnified real image; an electronic imagine scaling apparatus, and most importantly a miniaturized opto electronic image magnifier or ambient light is used.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US99/29559

**Supplemental Box**
(To be used when the space in any of the preceding boxes is not sufficient)

Sheet 12

Continuation of: Boxes I - VIII

Claims 35-42 meet the criteria set out in PCT Article 33(2)-(4), because the prior art does not teach or fairly suggest: a lens designed and adapted to produce a magnified real image; an electronic imagine scaling apparatus wherein the majority of the magnification is produced by the electronic scaling apparatus; an internal reflection element having a surface adopted to contact a sample and providing a first optical path for spectral measurement and a second path for viewing the sample.

---------- NEW CITATIONS ----------

US 6,057,540 A (Gordon et al.) 02 May 2000 [02.05.2000], see column 4, lijnes 34-50.

US 6,005,964 A (Reid et al.) 21 December 1999 [21.12.1999], see column 8, lines 25-30.

US 4,764,016 A (Johansson) 16 August 1998 [16.04.1988], see column 3, lines 1-10.

US 5,966,204 A (Abe) 12 October 1999 [12.10.1999], see column 10, lines 60-67.